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ABSTRACT

This report is the executive summary of a study examining the benefits of Head Start to children entering elementary school, assessing Head Start benefits to their parents, and describing the characteristics and services of the Head Start program. The data presented in this report were collected from a sample of Head Start graduates located in 32 sites (selected to represent Head Start programs throughout the country). In addition to assessing Head Start children, the study also included data, for comparison purposes, from children who were enrolled in the same classrooms as the Head Start graduates. Data were collected from the parents of both groups, from the elementary school teachers, and from the Head Start centers which the graduates had attended. The findings reported in this executive summary are drawn from the data contained within the final report and its appendices. While the final report is organized around a series of substantive analyses, this executive summary is organized around topics of policy concern. Findings summarized in this report focus on Head Start Center characteristics: Head Start Program descriptions, Head Start effects on parents, Head Start effects on children's social competence, and a program overview. (Author/JMB)

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Executive Summary of A National Survey of Head Start Graduates and Their Peers

March, 1978

Contract No. HEW 105-76-1103

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TABLE OF CONTENTS

	Page
Preface and Acknowledgments	i
1.0 INTRODUCTION	1
1.1 Purpose of the Study	1
1.2 Summary of Findings	1
Head Start Center Characteristics	2
Head Start Program Description	2
Head Start Effects on Parents	2
Head Start Effects on Social Competence	3
2.0 PROGRAM OVERVIEW	3
3.0 STUDY OVERVIEW	5
3.1 Design of the Study	5
3.2 Sampling Procedures	5
3.3 Instruments	7
3.4 Data Collection	7
3.5 Analysis	8
4.0 FINDINGS	9
4.1 The Structure of Head Start	9
1. How are Head Start programs distributed across the country?	9
2. What type of population does Head Start serve?	9
Ethnicity	9
Age	11
Family Background	11
3. How are Head Start centers organized?	12
Size	12
Staff Composition	12
Staff Ethnicity	12
Auspices	13
Relationship to Public Schools	14
4.2 The Contents of Head Start Programs	14
4. What types of educational curricula and activities do Head Start Centers provide?	15
5. What types of health services does Head Start provide?	16
6. What types of social services does Head Start provide?	17
7. What type of parent involvement does Head Start provide?	18
4.3 The Effects of Head Start on Children	20
8. Does Head Start benefit the child's academic school readiness?	21
9. How does Head Start affect the non-academic aspects of children's social competenc in the school setting?	21
4.4 Methodological Constraints to the Study	22
10. To what extent are the findings of this survey limited by constraints of the sample or methodology?	22
APPENDIX	25
A. An Heuristic Adjustment Strategy: "Value Added"	26
B. Forced Match Comparisons	26
Regional Stratification Map	28
Table of Contents for the Final Report	29

Preface and Acknowledgments

This report is the Executive Summary of "A National Survey of Head Start Graduates and Their Peers," (AAI-78-7), the final report submitted to the Office of Child Development, Office of Human Development, HEW, by Abt Associates Inc. in fulfillment of Contract HEW 105-76-1103. The final report, published March, 1978, provides the basis for this Executive Summary. In order that the reader of this Executive Summary may have a sense of the scope of the final report, the Table of Contents of the final report is appended.

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We wish to thank the many people who helped to make this study possible:

- Most of all, the children and the parents who allowed us to test and question.
- The teachers who allowed us to come into their classrooms and who answered many questions for us.
- The principals, superintendents, and administrators on local and state levels who allowed us to conduct the study.
- The personnel of the Head Start Grantees, Delegate Agencies and Centers for allowing us to conduct the study in their programs, and for providing us with the necessary information.

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*Contributing author to the final report.

- The Committee on Evaluation and Information Systems (CEIS) for their cooperation with the project.
- Particular thanks to Dr. Jess Elliot, Director of Research, Georgia State Department of Education and the State Coordinator for CEIS in Georgia, who served as liaison between CEIS and the project.
- Dennis Deloria, Office of Child Development, our Project Officer for the study, who worked with us and encouraged us in the study activities from its inception.
- The many Abt staff members not named in this report who helped in obtaining the cooperation of study sites.
- Finally, the members of the field staff who endured the Winter of 1976-77 (and the project) to collect the data from study participants.

1.0 INTRODUCTION

1.1 Purpose of the Study

The current study was conducted to assess the effects of Project Head Start on children and their parents during the children's first year in elementary school. Since the last national evaluation of Head Start in 1969, the program has experimented with a variety of innovative options to improve health, social, educational and parent participation services to children and families. This study is the first in a series of evaluations planned to update information on the effectiveness of all Head Start components.

The data presented in this report were collected from a sample of Head Start graduates located in 32 sites selected to represent Head Start programs throughout the country. In addition to assessing Head Start children, the study also included data, for comparison purposes, from children who were enrolled in the same classrooms as the Head Start graduates. Data were also collected from the parents of both groups, from the elementary school teachers, and from the Head Start centers which the graduates had attended.

The findings reported in this executive summary are drawn from the data contained within the final report and its appendices. Whereas the final report is organized around a series of substantive analyses, this executive summary is organized around topics of policy concern. Thus, there is not a direct correspondence between the sequence of information in this summary and in the final report. Rather, data have been drawn from several sections in the final report to examine, in turn, each of these policy issues. A summary of the findings on the policy-relevant topics is presented in the following section.

1.2 Summary of Findings

The following statements represent the conclusions obtained from this study. These results are discussed in greater detail in the remainder of this report.

Head Start Center Characteristics

- The regional distribution of Head Start centers corresponds closely with the distribution of the poverty level population.

- The ethnic composition of the Head Start program shows twice as high a percentage of blacks and Hispanic children in Head Start as their respective proportions in the U.S. poverty level population. The percentage of white children is roughly half their proportion in the poverty population. Thus, if the needs of the nation's children and families are defined by poverty and minority status, Head Start may be seen as responsive to both. On the other hand, the relatively smaller proportion of whites may suggest the need to expand these services to low-income white families.

- Head Start centers reported that about 60 percent of the enrolled children were four years of age; the remainder were evenly divided between three and five year olds. In regions where kindergarten programs are not mandated, Head Start serves a larger proportion of five year old children.

- The ethnic composition of Head Start center staff demonstrates that blacks and whites are evenly distributed within staff positions. However, the total staff ethnic composition does not match the respective proportions of black and white children, with black staff being underrepresented.

Head Start Program Description

- Head Start center directors overwhelmingly endorse self-esteem and social skill development as the priority curricular goals of the program. Academic skills, as a first priority, was endorsed by very few center directors.

- Most centers provide similar enrichment experiences for Head Start children; major variations in the pattern of activities are explained by the availability of resources in the location of the Head Start centers.

- Head Start programs provide children and families across the country with a full range of health and social services. Where community services are available, they are extensively used by Head Start programs.

Head Start Effects on Parents

- Head Start parents highly endorse the program as being helpful to their children and to themselves. It is a program to which they would send their younger children.

- There is a high level of reciprocal contact of staff visiting in the parent's home and of parents visiting or volunteering in the Head Start classrooms. The program facilitated the parents' understanding of the child's learning experiences in the first year of elementary school.

Head Start Effects on Social Competence

- For black children, the evidence suggests that Head Start graduates are academically better prepared for school than they would have been without the program. Due to non-comparability between white Head Start graduates and their peers, no inferences of program effects on academic school readiness were made.*

- At entry to elementary school, teachers tend to rate Head Start graduates, both black and white, as more active, less inhibited, more gregarious, and more aggressive in both sociable and non-sociable ways. This pattern of behavior is interpreted in this report as indicative of children who have an eagerness and a readiness to learn.

2.0 PROGRAM OVERVIEW

Project Head Start is a program designed to provide comprehensive services to children of low income families. Project Head Start now serves about 350,000 children, ages three to five at an expenditure for FY77 of $450 million of federal funds.

In 1965, Project Head Start, under the aegis of the Office of Economic Opportunity, operated as a 6-8 week summer program. In 1965-66 programs were extended to 4-6 months during the year. In the period 1969-1972 operations of the program were transferred to HEW, specifically to the Office of Child Development (now the Administration for Children, Youth and Families). During this period, in part as a response to the findings of the Westinghouse Report, Head Start became, primarily, a program of full year projects. In the period from 1972-75, the Head Start Improvement and Innovation program was inaugurated to upgrade program quality. One of the significant products of this effort was the development of Head Start Program Performance Standards which were formally promulgated as regulations in the Federal Register, effective July 1, 1975.

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*For a discussion of the methodological constraints, see Section 4.4, below.

These Performance Standards provide for:

1. The improvement of the child's health and physical abilities, including appropriate steps to correct physical and mental problems. The improvement of the family's attitudes toward future health care and physical abilities.

2. The encouragement of self-confidence, spontaneity, curiosity, and self-discipline, which will assist in the development of the child's social and emotional health.

3. The enhancement of the child's mental process and skills with particular attention to conceptual and verbal abilities.

4. The establishment of patterns and expectations of success for the child which will create a climate of confidence for present and future learning efforts and overall development.

5. An increase in the ability of the child and family to relate to each other and to others.

6. The enhancement of a sense of dignity and self-worth within the child and his family.

The performance standards acknowledge the interrelatedness of intellectual development and other factors that influence a child's development, such as medical and nutritional needs and the educational, psychological and emotional climate in the home and community. To encourage and facilitate development of the "whole" child, the performance standards mandate that Head Start should be a comprehensive, interdisciplinary program designed to deliver a broad range of social services. However, these guidelines do not set forth an agreed-upon curriculum for a preschool program. Rather, each program is responsible for developing and implementing its own curriculum.

Finally, in July 1977, a joint Senate-House committee proposed an increase in Head Start funding which would increase the coverage of services provided for children in need. Prior to this agreement, Project Head Start served only approximately 15% of the eligible Head Start population.

3.0 STUDY OVERVIEW

3.1 Design of the Study

In the spring of 1975, the Office of Child Development contracted with Abt Associates Inc. to perform an "Evaluation of the Transition of Head Start Children Into Public School."* This study was to be the first in a new series of investigations designed to assess the impact of Head Start upon children, families, and communities. As the first study, its purpose was to investigate the adjustment of the Head Start graduate to the first year of public school. Future studies would focus specifically upon those sub-areas which were the major performance standards specified in the Head Start guidelines.

The evaluation was planned as a two-year study, the first year of which was a pilot phase to address the problems of methodology, to prepare measures, and to define and select a "nationally representative Head Start sample" and an "appropriate comparison" group. Year two would constitute the full scale evaluation; data were to be collected both at the beginning (pre-test) and the end of the school year (post-test) from both groups of children. However, data collection at the end of the school year was cancelled due to time and funding constraints. Therefore, the design for this study involves only one data collection time point. Since there were no longer two points at which data were to be collected, the study lost this "pre-test" reference point. Thus, the design can be best characterized with respect to the childrens' Head Start experience, as "post-only."

3.2 Sampling Procedures

The measurement battery was administered in 32 sites containing Head Start programs selected by a stratified random sampling plan. Within sites, schools and classrooms were chosen on a random basis from among those having a sufficient number of Head Start graduates. The Head Start group consists of children who graduated from Head Start programs in May or June of 1976, and their parents. The non-Head Start group was drawn from children in the same classrooms as the Head Start children. Selection of the final child sample was random within classroom; however, in compliance with privacy regulations, only those children whose parents consented to their taking part were admitted into the sample.** Because of background

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*RFP HEW/OS 141-75.

**The results of this volunteerism could not be assessed in this study.

differences between blacks and whites in the sample in regional, education, income and family size distributions, the analyses in this study were performed separately for these groups. There are almost no significant differences in the demographic characteristics of black Head Start and non-Head Start children. However, in the white subsample, the non-Head Start group had significantly higher levels of parental income and education than the Head Start group.

Below we present a summary of the samples which constitute the major data sources in the study:

- Head Start Delegate Agencies

  A random sample of 300 Delegate Agencies (about 16% of all Delegate Agencies stratified by region and city size, and weighted in proportion to the number of children served) was selected. A final response rate of 92% was attained. Information on 1550 Head Start centers served by these Delegate Agencies was obtained in this survey.

- Head Start Centers

  The Head Start children ultimately selected for this study had attended a total of 122 centers in 32 sites. Of this sample, 99 centers responded to a questionnaire asking more detailed information than that obtained from the Delegate Agency Survey.

- Children

  Measures of child social competence were obtained in the areas of academic school readiness, socio-emotional attitudes, and classroom behaviors from a combination of individual tests, group tests, and teacher ratings. The basic analytic sample contained 656 Head Start children and 670 non-Head Start children. Of this latter group, 357 children, who had attended no preschool, formed the primary comparison group. The remaining children (313) had some other preschool experience. Limited comparisons are made with this latter group concerning parent interview data in this summary report.

- Parents

  A sample of 1326 parents of the tested children responded to a personal interview asking detailed questons about home background conditions, activities and opinions. The analytic sample of parents was the same as that for children.

3.3 Instruments

Ten measures comprised the data collection battery, including four child response measures, three child rating scales completed by the classroom teacher, a parent interview, a teacher questionnaire, a questionnaire completed by Head Start center personnel, and a questionnaire completed by Head Start Delegate Agencies. The instruments selected to assess child social competence were:

- Wide Range Achievement Tests--a set of tests of academic school readiness including reading, numbers and spelling subtests.
- Values Inventory for Children--a multiple-choice, child-response measure of the child's attitudes on the following subscales: Academic Motivation; Asocial Behavior; Sociability; Conformity; Adult Closeness; and "Me First."
- Friendship Choices--the child names the number of other children and friends in the classroom.
- Schaefer Classroom Behavior Inventory--teacher ratings of the child's behaviors on the following subscales: Introversion/ Extroversion; Hostility/Tolerance; Task Orientation.
- Beller Rating Scales--teacher ratings on the child's behaviors on the following subscales: Dependency on Children; Dependency on Adults; Dependency Conflict; Autonomous Achievement Striving; and Aggression.
- Pupil Observation Checklist--ratings by the teacher and examiner on the child's Test Orientation and Sociability.

3.4 Data Collection

Data collection was conducted at each of the sites by community interviewers, hired locally and trained by Abt Associates staff. There were two community interviewers at each site; additional data collection support was provided by Abt Associates staff. Such additional support was needed because of the effect the severe winter had on slowing down data collection efforts. Each site was monitored by Abt Associates field operations staff. Each site was visited at least once by Abt Associates staff in order to determine if field procedures were being properly observed.

Testing for the children was conducted in the school setting for both the group test (Values Inventory for Children) and the individual tests.

Interviews with the parents were conducted in the home. Ratings of the child done by the teacher and the Teacher Questionnaire were given directly to the teacher and mailed back to Abt Associates. Information from the Head Start centers was obtained through a questionnaire mailed to each Center Director and returned by mail.

3.5 Analysis

Analyses were performed initially upon the data from the sample of Head Start centers, Head Start graduates and of the parents of the graduates. These analyses are descriptive, designed to present a picture of the Head Start world and of the factors which lead to differences of the Head Start experience, among the various groups. In order to assess sources of possible variation, regression analyses were performed on the data characterizing the Head Start graduates and their parents.

Because subjects had not been assigned randomly to treatment groups, and because there were no pre-Head Start measures of the groups, a direct comparative analysis between the Head Start group and the no-preschool group is subject to certain inferential hazards. Two analytic approaches were employed to cope with these problems. First, for black children, where the correlations between background and outcome measures were sufficiently high to make adjustments, a "value added"* analysis was performed. Second, a weaker analytic approach was used to make forced matched comparisons* between the Head Start and no-preschool groups for blacks and for whites.

*A brief description of these procedures is presented in the Appendix.

4.0 FINDINGS

The findings summarized in this report are organized into three general areas: The Structure of Head Start Programs; The Content of Head Start Programs; and The Effects of Head Start Programs.

4.1 The Structure of Head Start

1. How are Head Start Programs distributed across the country?

Based on the regional definition used in the study,* 39.5% of the centers are located in the Northeast, 21.2% in the Southeast, 18.2% in the Southwest, 21.1% in the West (see Table 1). Compared to the corresponding regional distributions of the U.S. population, there is a tendency for the Northeast and West to have proportionally fewer Head Start centers and the southern areas to have relatively more. However, when the distribution of Head Start centers is compared with the regional distribution of the poverty-level population, the relative proportions are very nearly the same, differing in each region by only three or four percentage points. Thus, Head Start services are available to the various areas of the country in close accord with the regional distribution of the target population.

Across categories of city size, as reported in Table 2, 44.1% of the Head Start centers are found in cities with greater than 50,000 population, 22.3% are located in cities between 10,000 and 50,000, and 33.6% are found in cities and areas of less than 10,000 population. Compared to the national distribution of the U.S. poverty population, relatively more Head Start centers are found in the medium-sized cities, in smaller towns and in rural areas; relatively fewer centers are located in large cities than is true for the distribution of the U.S. poverty-level population.

2. What type of population does Head Start serve?

Ethnicity. As reported in the Delegate Agency Survey (N=1550 centers), slightly over half of the children in Head Start are black; about one-quarter are white; 15% are of Hispanic background; and the remaining percentage are of other ethnic groups. The percentage of black and

*For analysis purposes the United States was divided into four regions. For a description of the regions see the map in the Appendix.

TABLE 1

Distribution of Head Start Centers by Region,
Total and Poverty Level Population
(In Percentages)

	GEOGRAPHIC REGION			
	Northeast	Southeast	Southwest	West
TOTALS				
Head Start Centers*	39.5	21.2	18.2	21.1
Total U.S. Population**	49.9	15.8	10.0	24.3
U.S. Poverty Population**	38.3	25.1	15.5	21.1

* Sample N=1550 centers.
** 1970 U.S. Census data.

TABLE 2

A Distribution of Head Start Centers by City Size,
Total U.S. and Poverty-Level Populations
(In Percentages)

	CITY SIZE		
	Urban More than 50,000	Small Town 10,000-50,000	Rural Less than 10,000
TOTALS			
Head Start Centers*	44.1	22.3	33.6
Total U.S. Population**	35.9	19.3	44.8
U.S. Poverty Population**	47.5	8.9	43.6

* Sample N=1550 centers.
** 1970 U.S. Census data.

Hispanic children in Head Start is roughly double their proportion in the poverty-level population, while the percentage of white children in Head Start is about half their proportion in the U.S. poverty-level population.

Age. The 1550 Head Start centers reported that 19% of their children were three-year-olds, 61% four-year-olds, and 20% were five-year-olds. In the Southeastern region about half of the children were five years old, and in the Southwestern area about one-fourth were five-year-olds. It would appear that Head Start serves as a kindergarten experience for many children in areas where kindergarten is not locally funded.

Family Background. Information from the Parent Interview shows that 46.5% of the mothers of Head Start children had not completed high school, 43.6% received high school diplomas, and 9.9% had some education beyond the high school level. The median income of Head Start families was about $6000 per year, and the mean family size 5.5 members. Considering that the poverty level criteria for a family of five with non-farm income was $6400 in 1976, it would seem that about 70% of the Head Start families are near or below the eligibility (poverty) level. Head Start regulations permit the enrollment of no more than 10% of the children above the income eligibility level. These figures may overstate income levels and thus under-estimate the percent of poverty-level families in Head Start, since this survey included income from all sources, whereas income for the determination of Head Start eligibility is judged prior to the inclusion of certain benefits.

Data on family composition indicate that 27% of Head Start children live in single-parent households, 56.2% live in two-adult households, and 16.8% live in households with more than two adults. Within the two-adult households, 89% of these families have either one or both adults employed. In single-parent households, however, only about 23% of these heads of households reported that they were employed.

One additional finding relating to children's background was noteworthy. The non-Head Start children were found to represent two groups: one had attended some other preschool (47%); the other group had remained at home during the preschool years (53%). These data suggest that roughly the same proportion of parents seek some preschool situation for their child as those who keep their children at home. Thus, there appears to be a demand for preschool services similar to those offered by Head Start.

3. How are Head Start Centers organized?

Size. The number of children per center averages 41.7 across the country; however, centers in the Southeast region have a mean enrollment of 49.4 while the other regions average about 40 children per center. Head Start centers typically have two or three classrooms. The mean classroom size within Head Start centers was 22 for the total national sample; however, classroom sizes in the Southeast and Southwest areas averaged between 17 and 18 children, while the Northeast and urban centers averaged 25.6 children per classroom.

Staff Composition. Head Start centers reported a mean of 7.8 full-time staff members. For other staff, the centers reported means of 6.5 part-time staff and 9.4 volunteers. Typically, the full-time staff included teachers, aides, and administrative and support personnel. Part-time staff included specialists in health, nutrition, social services as well as some parents and aides.

Staff Ethnicity. The distribution of staff ethnic types within staff positions shown in Table 3 demonstrates that about equal numbers of blacks and whites are found at all levels of center staffing, while relatively fewer Hispanics* and others are found in the supervisor and teacher ranks.

When staff ethnic composition is compared to child ethnic composition, however, there is a relatively higher percentage of white staff members than of white Head Start children, and relatively lower proportions of black and other minority staff members relative to the respective distributions of minority children.

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*Due to methodological considerations, it was decided to exclude from the study centers enrolling primarily Hispanic children. Since we may expect a larger proportion of Hispanic staff to be employed in centers serving Hispanic children, it is probable that Hispanic staff are also underrepresented in this survey.

TABLE 3

Ethnic Composition of the Head Start Centers by Level of Staff Position (In Percent).

Level of Staff	Ethnicity of Staff			TOTALS
	White	Black	Hispanic/Other	
Supervisor	7.2	9.6	0.7	17.5
Teacher	13.4	13.7	1.4	28.5
Aide	12.1	13.7	2.7	28.5
Other	11.7	10.3	3.4	25.4
TOTALS	44.4	47.3	8.3	100.0%
Ethnic composition of Head Start Children	26.4	55.3	18.3	100.0%

Auspices. Respondents to the Head Start center survey indicated the following distribution of program auspices, or sponsoring agencies:

- Community Action Agency 64.6%
- Non-profit Agency 11.1%
- Public School 10.1%
- College/University 4.0%
- Religious Organization 2.0%
- Other 8.1%

All of the centers under the auspices of public schools were found in large urban settings. The centers under CAA auspices were found in all regions and city size categories. Non-profit groups operated centers in both urban and small towns, while college-sponsored centers were found only in rural areas, and the "other" category of sponsorship found only in Southeastern, small town settings.

Relationship to Public Schools. One item on the Head Start questionnaire sought to determine, for those centers not operated by public schools, the extent to which the center made use of school resources or personnel. The results, summarized below, suggest that working relationships between Head Start centers and public schools are functionally much closer than would be expected from an analysis of the data relating to program auspices.

TABLE 4

Head Start Center Utilization of Public School Resources

Area of Contact or Use of Public School Resources	Percent of Head Start Centers
Use of Buildings	58%
Use of Offices	25%
Administrative Personnel	58%
Teachers from School System	87%
Curriculum Supervisors	49%
School Program Coordinators	81%
Other	45%

The most frequent contact between schools and Head Start centers occurs with the use of teachers and program coordinators, but the amount and nature of the contact was not determined in this study. These data suggest that there may be a relatively high degree of administrative continuity between many Head Start centers and the elementary schools. Other aspects of program continuity between Head Start and public schools remain to be explored.

4.2 The Contents of Head Start Programs

Data from the Head Start center questionnaire and, to some extent, from the Parent Interview, were examined for their descriptions of center

activities and the kinds of services provided by Head Start. This information is summarized below as it pertains to the four domains specified in the Head Start Performance standards: Education; Health and Nutrition; Social Services; and Parent Participation.

4. What types of educational curricula and activities do Head Start centers provide?

When asked to rate the most important aims of their curriculum, Head Start center directors almost always cited the improvement of the child's sense of self-worth, self-confidence, and sense of efficacy. This area pervaded other curricular interests. Thus, in the summary below, self-esteem is clustered with the responses to other curricular goals. Academic skills, as a first priority, was endorsed by very few center directors. The types of curricular goals and the ratings of their relative priorities are summarized in Table 5.

These curricular priorities were similar to the most important areas reported by Head Start center directors in the Westinghouse/Ohio study. At that time, the development of self-worth and self-acceptance were rated as most important, and the development of specific academic skills and concepts were rated as least important. The fact that there has been

TABLE 5

Head Start Center Director's Endorsement of Curricular Goals

Cluster of Curricular Goals	Percent of Directors Rating Area as Most Important
Self-esteem/Social skills	41%
Self-esteem/Motivation	22%
Language development/Self-esteem	16%
Sensory-motor development/Self-esteem	16%
Academic skills/Language development	4%

uniformity across the country and persistence of emphasis across a decade clearly indicates Head Start is a program intended to develop the whole child, not just to inculcate academic school readiness. However, recent surveys of the literature suggest that children do benefit academically from Head Start attendance.*

The kinds of daily activities reported by Head Start center directors indicate a varied experience for children. Virtually all centers reported that creative experiences, language development, social skills and small motor development were part of their daily activities. Close to 90% of the centers reported that dramatic play, problem-solving, relationships with adults, and food and health habits were also part of their daily activities. Science and math concepts were indicated as daily activities by about 60% of the centers.

5. What types of health services does Head Start provide?

Few data were collected in the current study on the direct delivery of health services. The centers did, however, report on the availability and use of various health-related agencies or services in the community.

TABLE 6

Community Health Services Availability and Utilization by Head Start Centers

Community Health Resource	Percent of Centers Reporting Availability	Percent of Centers Reporting Use If Available
Nutrition Service	98%	96%
Public Health Clinic	97%	100%
Medical Lab	84%	99%
Comprehensive Health Center	52%	89%

In addition to these community resources, some centers reported health or nutrition professionals on their staff. Forty-eight percent of the centers reported health personnel on their part-time staff, and 12% on their

*See Mann, A.J., Harrell, A., and Hurt, M. A Review of Head Start Research Since 1969. Manuscript, Social Research Group, George Washington University, December, 1976.

full-time staff, while 21% of the centers had health care consultants. The incidence of nutrition professionals was reported as 36% on part-time, 12% on full-time, and 19% on consultant status.

In general, health care facilities are available to most of the Head Start centers, and those facilities which are available are widely used. Data on the health status of children or on the effects of health service delivery were not obtained in this study, with the exception of a parents' report on the child immunization record. These reports indicated that close to 98% of the Head Start children had been immunized against DPT, polio and measles. These levels are strikingly high when one considers that national estimates of the number of children not fully protected at school entry run close to 30%. Further studies should obtain full documentation to determine just how up to date the child's record is, and information on the booster shots required for children of school age.

In addition, Head Start parents reported, with much higher frequency than did the parents of children who had attended some other preschool, that their program helped to arrange for other medical care (79% affirmative for Head Start parents; 41% affirmative for other preschool parents). Also, more Head Start parents (81%) report that the Head Start program has helped the child with hygiene and food habits than did other preschool programs as reported by the parents of other preschool children (58%).

6. What types of Social Services does Head Start provide?

A number of responses on the Head Start Center Questionnaire and the Parent Interview suggest that Head Start is delivering social services to families and children. Reports from Head Start centers suggest that Head Start is bringing families into contact with a number of social services in the communities, as summarized below.

TABLE 7

Community Social Service Availability and Utilization by Head Start Centers

Community Social Service Resource	Percent of Centers Reporting Availability	Percent of Centers Reporting Use if Available
Mental Health Clinic	90%	87%
Guidance Clinic	67%	90%
Work and Recreation Facility	72%	86%
Family Planning Agency	93%	86%

These data suggest that most Head Start communities have available a variety of social agencies. Where they are available, these services are widely used.

While these data do not document the adequacy of any one type of social service to the needs of families, indirect evidence of social service delivery in Head Start can be obtained from the Parent Interview. When asked if the preschool program had helped with family or personal problems, 33% of the Head Start parents reported that Head Start had been of "some" or a "great deal" of help, while only 16% of the parents with children in some other preschool program responded in like manner. In addition, 82% of the Head Start parents reported that the program provided them with an opportunity to get together with other parents at least once a month, while only 48% of the other preschool parents reported likewise. Meager as these data are, they suggest that a closer study of social services in Head Start would reveal that the program is successfully responding to a number of personal and family needs.

7. What type of Parent Involvement does Head Start provide?

The Parent Involvement objectives in the Performance Standards call for Head Start to enhance the parents' role as the principal influence in

the child's development, to provide opportunities for parents to participate in program planning and classroom activities, to establish two-way visits with teachers going to homes and parents going to centers, and to foster knowledge and self-confidence in parents' approach to their children's development. Data from the Parent Interview and the Center questionnaires provide information about Head Start functioning in these areas. When asked to rate the participation of parents in various class activities, over 95% of the Head Start center directors rated parent involvement as "frequent" or "occasional." Between 40% and 55% of the centers described as "frequent" the class participation by parents in the following activities: Watch or help in class; Help in class with materials; and Help with special projects. In the reports of Head Start parents themselves, 67% reported that they had helped in the Head Start classrooms, and 49% said they had helped in class at least once per month. For the other preschool parents, however, 49% reported that they had helped in their preschool classrooms, and only 25% had helped as much as once per month. Concerning visits to the homes by by center staff, 81% of the Head Start parents reported that someone from the center had visited their home; 34% reported four or more visits during the year. By way of contrast, only 43% of the parents of children who had attended some other preschool reported visits to their homes by preschool staff, and only 16% reported more than four visits during the year. These data suggest a high level of reciprocal contact between Head Start centers and parents.

Parent participation was associated with benefits carrying over into the child's elementary school year. Table 8 presents the responses of parents to questions about their child's current school year.

The data suggest that Head Start programs are accomplishing many of their objectives in the Parent Participation Performance Standard.

TABLE 8

Parent Activities and Knowledge of the Elementary School Year

Parent's Activities and Knowledge of the Current School Year	Percent of Head Start Parents Agreeing	Percent of Other Preschool Parents Agreeing
The program gave me a better understanding of what children do in school.	89%	42%
The program helped me get acquainted with the child's teacher.	62%	41%
The program helped me to help the child with current school work.	80%	54%
The program helped me to understand how children learn.	91%	77%
The program helped me to plan the child's current school program.	79%	67%

4.3 The Effects of Head Start on Children

One of the objectives of this study was to assess the social competence of Head Start graduates and their non-Head Start peers at their entry into elementary school. From this assessment we have made some inferences about the possible effects of Head Start attendance on children. The limitations of these inferences are discussed in the next section. In the analyses comparing Head Start graduates to their classmates, separate analyses were performed for blacks and whites. This distinction seemed appropriate in view of the significant differences in the socio-economic background of the two groups. For example, even though the entire sample was drawn from the low-income and near-poverty segment of the U.S. population, whites tended to have significantly higher annual incomes than blacks. (The income level of blacks who had an education beyond high school was about equal to the income of the white group who had not graduated from high school.) Thus, the findings are summarized separately for blacks and whites.

8. Does Head Start benefit the child's academic school readiness?

For blacks, the evidence suggests that Head Start graduates are academically better prepared for school than they would have been without Head Start attendance. Compared to their peers who had remained at home prior to elementary school, black Head Start graduates scored significantly higher on the Wide Range Achievement Tests. In an effort to determine the types of environments in which this Head Start-favoring effect was found, the achievement scores of Head Start and non-Head Start groups were compared within various categories of demographic characteristics. Black Head Start graduates who live in the Southeast region, who come from single parent families and who come from low-income families (income of less than $5200) scored higher than expected* when compared to their peers.

For the white sample the situation was somewhat different. Unlike black children, the white Head Start and non-Head Start groups differed on the levels of their background characteristics. The non-Head Start group came from families with higher incomes, higher levels of education, and fewer single-parent families. This condition, combined with the heterogeneity of regression of scores on background variables prohibited a rigorous comparative analysis.

9. How does Head Start affect the non-academic aspects of children's social competence in the school setting?

A number of child response and teacher rating measures were used to assess the child's interest and motivational orientation toward school, and the child's style of adaptation to other children and adults in the classroom. The most meaningful data came from teacher ratings of each child. In the separate analyses of blacks and whites the same pattern of differences appeared between the Head Start graduates and their peers with no preschool program attendance. Head Start children tended to be higher on proximity and attention-seeking; less conflicted in these types of behaviors; and higher on assertive/aggressive behaviors. This pattern is interpreted in the following manner: Head Start children tend more to seek closeness with

*Based on a regression equation taken from the non-Head Start sample, academic scores were estimated for the Head Start sample. Where the actual Head Start scores exceeded the estimated scores, there was judged to exist a Head Start-favoring "effect."

other children and adults, attention from others and to a certain extent more help from others. At the same time, they are more direct and consistent, and less confused or vacillating in these activities, suggesting a higher level of confidence or certainty. Also, Head Start children tended to be rated higher on their displays of physical or verbal aggressive behavior. These group differences were observed by directly comparing Head Start and non-Head Start children matched (one variable at a time) on a number of background factors such as sex, regional distribution, mother's education, income level and family composition. This pattern tended to appear for both blacks and whites across the various background conditions. Since these results were obtained with a test of low statistical power, we would expect a more powerful analysis to reveal such patterns even more clearly. Taken as a whole, the results characterized here suggest that Head Start children are more active, more gregarious, less inhibited, and have an eagerness to learn.

It is also important to note that these findings were derived from teacher ratings. Ratings such as these express a relationship between a child and a teacher, a relationship which may be perceived differently by other adults or children depending upon the social circumstances and individual characteristics associated with the teacher-child relationship. What remains to be determined are the teacher, classroom and instructional settings in which this behavioral style facilitates learning and productive adaptation to school, and the circumstances under which this pattern does not lead to productive school performance.

4.4 Methodological Constraints to the Study

> 10. To what extent are the findings of this survey limited by constraints of the sample or methodology?

Two types of precautions are appropriate for the data in this survey: one applies to the descriptive data about Head Start centers, children and families; the other applies to inferences about the effects of Head Start on children and families.

The descriptions of Head Start centers, derived from the sampling of Delegate Agencies and their associated Head Start centers, are considered to be well representative of Head Start as a whole.

The data describing the operations and contents of centers, however, were based on a subsample of 99 centers, and were subject to certain biases. First, as discussed above (p. 12), a decision was made at the beginning of the study to exclude centers enrolling primarily Hispanics. Thus, the Head Start center questionnaire, as well as the child and parent samples, under-represent the Hispanic children. A second type of bias applies to the Head Start center questionnaire. Whereas the children selected into the study came from a total of 122 Head Start centers, complete data were obtained from only 99 of these centers. The direction of the resulting non-response bias is not known. However, where data such as curricular goals or service usage indicated a uniformly high level of agreement, it is estimated that the descriptive conclusions would not be substantially altered by the exclusion of the non-responding centers.

While the conclusions about Head Start program descriptions rest on relatively solid ground, inferences about the effects of Head Start on children and parents are subject to more serious limitations. Problems with non-random assignment and with somewhat different comparison and "experimental" groups are endemic to quasi-experimental studies which seek to establish causal inferences. The advent of stricter privacy laws in the last several years has exacerbated this problem in naturalistic field studies. Since this study was conducted in strict compliance with privacy and consent regulations, children and parents within the schools visited could be selected into the study only if they volunteered for their children to be tested, and themselves to be interviewed. The effect of this constraint was two-fold. First, within the Head Start population, we suspect from field reports that the lowest income levels tended to volunteer less for inclusion in the study. The extent of this potential bias was not determined. Second, it was stated that the comparison group children come from a higher income level than the Head Start children. Furthermore, the differences in income level between Head Start and non-Head Start groups were considerably greater

in the white sample than in the black sample.* When combined with the absence of child measures prior to Head Start entry, this condition makes it difficult to infer unambiguously that group differences on the child measures are attributable to the effects of Head Start.

Several factors prohibited the use of traditional covariance adjustments: the overall level of background measures was too dissimilar between Head Start and non-Head Start groups for whites (but not for blacks); the relationships between outcome measures and background measures were too dissimilar between Head Start and non-Head Start groups; and, the extent to which background measures "explain"** child scores differed too greatly between groups (for whites but not for blacks).

Despite these difficulties, there was a judgemental basis for inferring the effects of Head Start on children. First, where the condition of data did permit a more powerful statistical analysis of the academic scores for blacks, beneficial effects of Head Start were found. Second, these results were replicated in a less powerful analysis. Third, in spite of the low power of the forced match comparisons, a generally consistent pattern of effects appeared for both blacks and whites on the socio-emotional measures. The results from the low power analyses suggest effects which should be examined more closely in future studies of Head Start. Studies with greater experimental control through random assignment of children to treatment groups would facilitate a more rigorous analysis of all data. In summary, while this study may not be considered experimentally rigorous, we feel these data suggest that Head Start benefits children and their parents.

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*In the black subsample the non-Head Start group's income level exceeded the Head Start group's by one-half standard deviation, while in the white subsample the income difference was a full standard deviation.

**For all measures except the academic test, too little variance was accounted for (e.g., 3% to 19%) to justify the use of covariance adjustment techniques.

A. AN HEURISTIC ADJUSTMENT STRATEGY: "VALUE ADDED"

Since the Black Head Start graduates and children with no preschool have similar background characteristics, it is possible to estimate what the Head Start graduates' scores on the Wide Range Achievement Test might have been in the absence of preschool. This approach would provide an estimate of the "value added" to the Wide Range Achievement Test score as a consequence of participation in preschool. The approach would not be appropriate for the White group, since not only do the relationships between background and outcomes differ across the two White groups, but the two groups differ substantially on the level of background characteristics.

The "value added" by participation in Head Start may be estimated by computing predicted scores for the Black Head Start graduates utilizing the coefficients derived for the Black children with no preschool. That is, a predicted score may be obtained for each Head Start graduate using the background characteristics for each student and the relationships between the background characteristics and the outcome obtained from the comparison group. Using regression coefficients, it is possible to compute a predicted score as if the Head Start graduate had not participated in Head Start. The predicted score is assumed to be the score that the child would have obtained had s/he not participated in Head Start. The difference between the observed score which the child actually obtained and the predicted score can be computed. This difference represents the "value added" to the child's test performance by the Head Start experience.

B. FORCED MATCH COMPARISONS

The rationale for the forced match comparisons is to test for differences between Head Start and Home group means under a variety of conditions. For example, to what extent do the two groups differ in different regions, at different levels of mother's education, for relatively lower or higher income categories, or for boys and girls? No assumptions are made about the shape of the distributions of these various categories. The only requirement is that enough subjects are available in each cell to provide an estimate of a mean score. The objective in selecting the conditions

or categories in which group differences are examined is to identify areas of particular policy interest or conditions which may be associated with pre-existing group differences in performance. The result of many such comparisons is a mapping of the conditions under which Head Start group means differ (or fail to differ) from the non-Head Start scores. Group differences (e.g., those exceeding one-fourth of a standard deviation) which tend to appear consistently under a variety of conditions, even under conditions such as income level differences which are typically associated with child performance differences, lend credence to the inference that these differences may be attributable to the program experience. Where no consistent pattern of group differences appears, the results must remain ambiguous.

28

32

33

REGIONAL STRATIFICATION

TABLE OF CONTENTS

PAGE

ACKNOWLEDGEMENTS i

LIST OF TABLES vi
LIST OF FIGURES xi

READER'S GUIDE TO THIS REPORT xii

CHAPTER ONE: INTRODUCTION AND SUMMARY

1.0 PURPOSE OF THIS REPORT. 1-1
1.1 RESULTS OF THE STUDY. 1-1

1.1.1 Head Start Benefits for Children 1-1
1.1.2 Head Start Benefits for Parents. 1-3
1.1.3 Head Start Center Characteristics. 1-5
1.1.4 Head Start Program Description 1-6
1.1.5 Examining Head Start with Ex Post Facto Methods. 1-6

1.2 HEAD START PROGRAM GOALS. 1-7
1.3 HEAD START: THE NATIONAL PROGRAM STRUCTURE 1-8
1.4 FINDINGS FROM PREVIOUS STUDIES: A BRIEF SUMMARY. 1-10
1.5 HISTORY OF THE STUDY. 1-12

1.5.1 The OCD Procurement. 1-12
1.5.2 Objectives of the Abt Associates Proposal. 1-13
1.5.3 Implementation of the Study. 1-14

1.6 IMPLICATIONS FOR AND CONSTRAINTS UPON STUDY RESULTS 1-19

REFERENCES 1-21

CHAPTER TWO: PLAN OF RESEARCH

2.0 INTRODUCTION. 2-1
2.1 STUDY DESIGN. 2-1
2.2 SAMPLE. 2-1
2.3 MEASUREMENT BATTERY 2-2
2.4 DATA COLLECTION 2-2
2.5 DATA REDUCTION. 2-5
2.6 ANALYSIS STRATEGY 2-6

CHAPTER THREE: THE SAMPLE DESIGN

3.0 INTRODUCTION. 3-1
3.1 PRELIMINARY DEFINITION: HEAD START AND COMPARISON CHILDREN . . . 3-2
3.2 INTRODUCTION TO THE SAMPLING PLAN 3-3

PAGE

CHAPTER SIX: PARENTS' REPORTS OF HEAD START

6.0 INTRODUCTION 6-1
6.1 PARENT INTERVIEW INSTRUMENT 6-1
6.2 CHARACTERISTICS OF THE PARENT INTERVIEW SAMPLE 6-2

6.2.1 Family Size and Composition. 6-2
6.2.2 Education. 6-3
6.2.3 Employment 6-4
6.2.4 Income 6-4
6.2.5 Region and City Size 6-6

6.3 PARENTS' REPORTS OF SERVICES AND BENEFITS OFFERED BY HEAD START . 6-8

6.3.1 Health and Nutrition 6-8
6.3.2 Social Services. 6-9
6.3.3 Parent Involvement and Parent Education 6-10
6.3.4 Post-Head Start Parent Involvement, Educational Attitudes and Educational Environment in the Home. 6-16

6.4 SUMMARY 6-26

CHAPTER SEVEN: A DESCRIPTION OF SOCIAL COMPETENCE IN HEAD START GRADUATES

7.0 INTRODUCTION. 7-1
7.1 CHARACTERISTICS OF HEAD START GRADUATES 7-1

7.1.1 Ethnic Type and Sex Distribution 7-2
7.1.2 Age Distribution 7-2
7.1.3 Mothers' Education 7-5
7.1.4 Family Income and Composition 7-5
7.1.5 Family Size. 7-9

7.2 MEASURES OF SOCIAL COMPETENCE 7-9
7.3 DESCRIPTIVE ANALYSIS OF CHILD SOCIAL COMPETENCE 7-12

7.3.1 Method 7-12
7.3.2 Regression Results 7-16
7.3.2.1 Academic Performance. 7-16
7.3.2.2 Motivational Orientation 7-22
7.3.2.3 Prosocial Adaptive Behavior 7-30
7.3.2.4 Unsocial, Immature Behaviors. 7-35

7.4 SUMMARY 7-38

REFERENCES 7-40